

STRONGYLIDÆ IN HORSES

VI. *CYLCOSTOMUM PSEUDO-CATINATUM* sp. n.

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SIZE AND SHAPE. A small delicate species of the GENUS *Cylicostomum*, the female being slightly larger than the male. Ten males and ten females were measured. The males were from 5.2 to 6.6 mm., average 5.8 mm.; the females from 6.1 to 7.7 mm., average 6.7 mm.: the greatest breadth, in those worms which were properly orientated, averaged, males 260 μ , females 320 μ .

Fig. 1

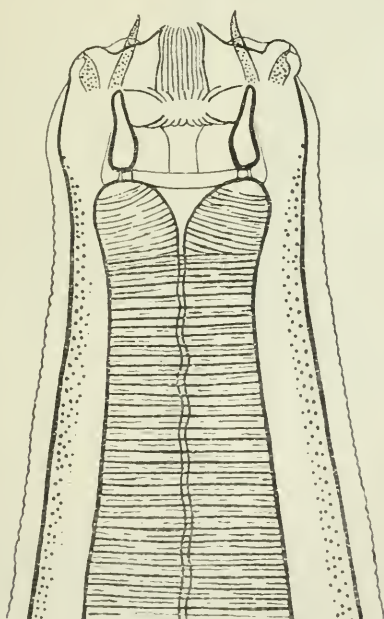
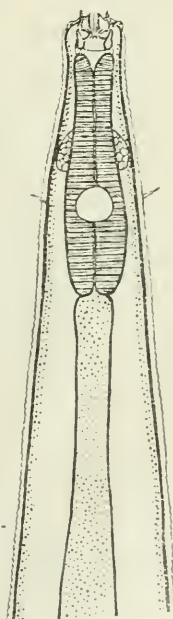


Fig. 2



FIGS. 1-2. *Cylicostomum pseudo-catinatum* sp. n.

Anterior extremity, ventral view; Fig. 1 \times 360. Fig. 2 \times 90.

HEAD. The neck separating the head from the body is distinct.

Mouth collar. Marked off from the rest of the skin by a definite constriction.

Head papillae. Sub-median, pointed and projecting beyond the elements of the external leaf crown, their extremities are not separated off by lateral notches; lateral, prominent.

Mouth capsule. Ellipsoidal in transverse section, the ratio of the lateral diameter to the dorso-ventral diameter of the anterior opening

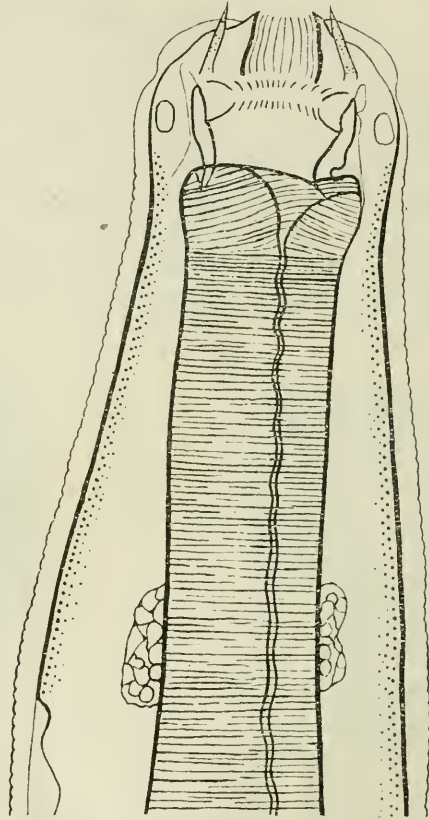


FIG. 3. *Cylicostomum pseudo-catinatum* sp. n.

Anterior extremity, lateral view, $\times 360$.

of the buccal capsule being about 1 to 1.2. When the worm is properly orientated the walls of the mouth capsule seen in optical section are slightly kneed inwards, are very stout posteriorly and slender anteriorly (fig. 1). When viewed laterally the walls of the buccal capsule converge considerably from before backwards and the ventral wall is distinctly larger than the dorsal owing to the floor of the buccal capsule being set obliquely, so that the cavity is deeper ventrally than dorsally (fig. 3). The antero-posterior diameter (i.e. the distance from the anterior to the posterior opening) of the buccal

capsule varies in the males from 22.5μ to 25μ , average 24μ , and in the females from 24μ to 29μ , average 27μ . In the males the lateral diameter of the buccal capsule at the anterior opening varies from 34μ to 38μ , average 36μ , and at the posterior opening from 31.5μ to 33.5μ , average 33μ ; in the females the lateral diameter of the buccal capsule at the anterior opening varies from 41μ to 47.5μ , average 43μ , and at the posterior opening from 34.5μ to 37μ , average 36μ . The ratio of the lateral diameter of the anterior opening of the buccal capsule to that of the posterior opening is therefore in the male 1.1 to 1, and in the female 1.2 to 1. The ratio of the lateral diameter of the buccal capsule at the anterior opening to the antero-posterior diameter is in the male 1.5 to 1, and in the female 1.6 to 1.

Dorsal oesophageal gutter. Does not project into the buccal capsule.

Leaf crowns. The external leaf crown consists of twenty large pointed elements arising from the mouth collar. The internal leaf crown consists of numerous long narrow elements arising from the middle of the mouth capsule just anterior to the knee, but not within a single plane, the line of origin laterally being somewhat nearer the anterior opening of the mouth capsule than it is dorsally and ventrally.

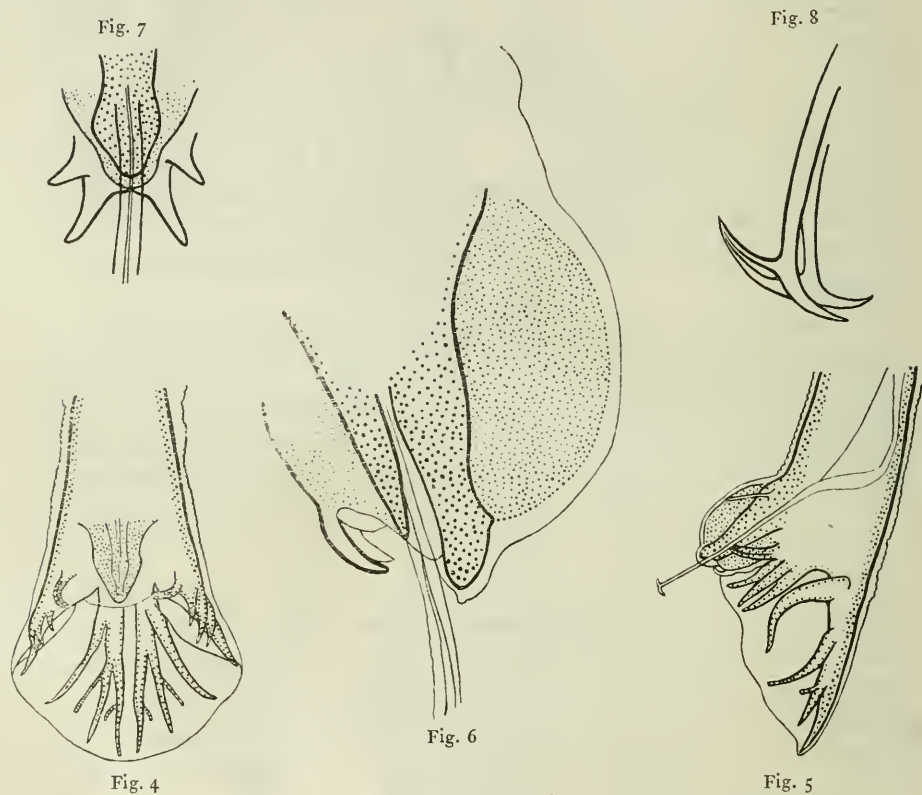
OESOPHAGUS. The length in eight males varied from 314μ to 349μ , average 330μ , and the greatest breadth from 70μ to 82μ , average 74μ ; the ratio of breadth to length is 1 to 4.4. In eight females the length ranged from 322μ to 363μ , average 347μ , and the greatest breadth from 72μ to 83μ , average 79μ ; the ratio of breadth to length is 1 to 4.4. The ratio of the length of the oesophagus to that of the worm is 1 to 19.

EXCRETORY BLADDER. Lies over the 3rd or 4th fifth of the oesophagus behind the nerve ring. The distance of its posterior margin from the posterior end of the oesophagus varies considerably, e.g., in sixteen worms from 67μ to 152μ , average 108μ .

CERVICAL PAPILLAE. Lie about the same level as the excretory bladder.

POSTERIOR EXTREMITY OF MALE. The dorsal lobe of the bursa is short, almost semicircular. The main trunk of the posterior ray and the second lateral branch are as a rule each furnished with a small accessory branch on the external side (fig. 4). In ten worms the

length of the main trunk of the posterior ray from the tip to the point of origin of the postero-external rays varied from 230μ to 298μ , average 259μ . The ratio of the average length of the main trunk of the posterior ray to the average length of the male worm is 1 to 22.4.



FIGS. 4-8. *Cylicostomum pseudo-catinatum* sp. n.

Fig. 4: Posterior extremity of male, ventral view, $\times 90$. Fig. 5: Posterior extremity of male, lateral view, $\times 90$. Fig. 6: Genital cone and appendages, lateral view, $\times 360$. Fig. 7: Genital appendages, ventral view, $\times 360$. Fig. 8: End of spicules, $\times 1360$.

Genital cone. The dermal collar is well developed on both the ventral and dorsal surfaces of the genital cone. The genital appendages on each side are represented by slight elevations furnished with two conical processes, the inner being the larger (figs. 6 and 7).

Spicules. The ends of the spicules are barbed as shown in fig. 8.

POSTERIOR EXTREMITY OF FEMALE. The end of the body is bent dorsally at right angles. The ventral prominence is large and projecting. The tail is very short and conical (fig. 9.). In six worms the distance between the anus and vulva varied from 45μ to 85μ , average 61μ ; and the distance measured straight along the middle line of the tail from the tip to a line drawn horizontally through the anus varied from 54μ to 81μ , average 69μ .

DIAGNOSIS. The following are the chief diagnostic characters of this worm:—

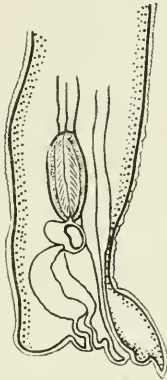


FIG. 9. *Cyclostomum pseudo-catinatum* sp. n

Posterior extremity of female, lateral view, $\times 90$.

1. Size, small: average length, males 5.8 mm. and females 6.7 mm.

2. Buccal capsule: anterior opening ellipsoidal, ratio of lateral to dorso-ventral diameter of anterior opening of capsule is 1 to 1.2; walls when seen in optical section, in properly orientated worms, slightly kneed, very thick posteriorly and slender anteriorly; ratio of breadth at anterior opening to antero-posterior diameter 1.5 to 1.

3. Dorsal oesophageal gutter does not project into buccal capsule.

4. Dorsal lobe of bursa short, almost semicircular; ratio of length of posterior ray to total length of male worm 1 to 22.4. The genital appendages are slight elevations furnished with two conical processes.

5. Termination of female body bent dorsally at right angles; ventral prominence large and projecting; tail short and conical.

This species clearly belongs to the *catinatum-alveatum* group of Cylicostomes. It most closely resembles *C. catinatum*, but may be distinguished from this worm by its small size and by the character of the genital appendages. We propose for this species the name *Cylicostomum pseudo-catinatum*.